

Woodland High School
AP CHEMISTRY
2012-2013 Course Syllabus

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Course Website:

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Course Description:

AP Chemistry provides an orderly development of the fundamental concepts and principles of chemistry with an emphasis on inquiry and critical thinking skills including problem solving, mathematical reasoning, and experimental investigations. Topics of study include structure of matter, states of matter, chemical reactions, and descriptive chemistry. Laboratory work is an integral component of this course. Technology including graphing calculators, probeware, graphing and data analysis software, and chemistry apparatus are used throughout this course.

Through our system has an open enrollment policy, students should understand that this course is designed to be a second year chemistry course and the equivalent of a year-long introductory college level general chemistry course. The course requires a working knowledge of chemistry and second-year algebra. The breadth, pace, and depth of material covered exceeds the standard high school Chemistry course, as the college-level textbook, laboratory work, and time and effort required of students. Students are expected to take the AP Chemistry Exam at the end of the course.

Textbook: *Chemistry: 7th Edition by Zumdahl & Zumdahl*

Supplies:

- 3-ring binder
- Notebook dividers (10)
- Notebook paper
- Pens/pencils
- Composition book
- Scientific calculator

Evaluation:

Labs/Unit Test	60%
Quizzes/Problem Sets	20%
Daily	20%

*Final Grade Calculation = Average of Semester 1 & 2

All assignments are due at the beginning of the class, unless otherwise stated. All work turned in after this time will receive 70% maximum (if you make 100, your grade will be a 70) and a zero afterwards. If you are absent, you have three days to make up any missed work. For extended absences, this time frame can be modified.

Class Expectations (Four Be's):

- 1) Be respectful of all people and equipment.
- 2) Be responsible by following all school policies.
- 3) Be mature by coming prepared to class and staying focused during class time.
- 4) Be safety conscious by following all rules in regards to the science laboratory.

If a student chooses not to follow these expectations, the consequences will be as follows:

- 1) Verbal warning
- 2) Call to parent/guardian
- 3) After school detention (4:00-4:30) (Note: Student will be responsible for arranging transportation, if necessary)
- 4) Discipline referral to administration

Class Procedures/Policies:

- Beginning of class → When you come into class, pick up any handouts needed for that class, which will be located on the front bench. Prepare for class by getting out all necessary supplies at your seat. This may include sharpening pencils, using the restroom, etc. Once you are settled, you need to work on the warm-up, which will be posted on the white board or projected on the screen.
- Missing Supplies → If you do not have paper or pencil, try borrowing from a neighbor or a friend. If you cannot find any supplies this way, there are some extras at the front of the room. These are communal so please return any borrowed supplies after using them, as there is a limited quantity.
- During class time
 - Getting your attention → I will ring a bell when I need to get your attention. When this happens please stop what you are doing and look up at me with your undivided attention. This may mean turning your body or chair to face me.

- Working in groups → We will do many collaborative activities in this class. You should contribute to these activities; those students who wish not to participate will be given no credit for the assignment. Also remember that you only need to speak to those in your group so please pay attention to the volume of your voice.
- Leaving the classroom → If you need to use the restroom or get water, you will have two opportunities to leave the classroom: before class starts or after the warm-up and instruction for the class is given (typically after the first ten minutes of the period). There are two passes (one male and one female). After the warm-up and initial instruction has been given, you may leave the classroom if the pass is available. You are to use these passes to go to the restroom or get water and then come immediately back to the classroom. Any other passes should be obtained from me.
- An announcement is made → You should stop talking immediately and listen to the announcement. It may not pertain to you but out of respect of myself and your classmates, you need to remain silent.
- Class dismissal → The bell does not dismiss you, I do. Please only pack up once I have indicated that class is over. Make sure to put up any borrowed supplies or equipment used and throw away all of your trash. There are no magic cleaning fairies ☺.
- Being tardy or absent → On the first day of class, you will pick a “homework buddy.” This person will be who you talk with about assignments if you are tardy or absent. There will be a makeup work box that will contain all of the assignments from each class. Remember that the bell signals the beginning of class. If you come in after this, you will be marked tardy. After four (4) tardies, a referral will be written, as Woodland High’s attendance policy.
- Assignments
 - Lab Reports → There will be six formal lab report due throughout the year. Every three labs completed, you will pick one to write up as a formal lab report. All other labs will include all questions (prelab & postlab), calculations/graphs, and a discussion. All labs will count as test grades.
 - Problem Sets → Each unit will have at least one problem set of 15-20 questions to be turned in on the day of the unit test. Student solution manuals will be available during class time and before and/or after school (they may NOT be taken home). Each day I will indicate on the board which problems can be complete after that class period. These will count as a quiz grade.
 - Classwork → Any work done during class for a completion grade will be stamped and initialed by myself for full credit. If an assignment is not completed during class, you need to show it to me the following day to get credit. These will count as daily grades.

****Material in this syllabus is subject to modification by the instructor if deemed necessary
(These changes will verbally and written on the board).****

Tentative Schedule

Unit	Chapters Covered	Time Frame
I: Chemical Foundations	Chapter 1: Chemical Foundations Chapter 2: Atoms, Molecules, and Ions	1 week
II: Chemical Reactions & Stoichiometry	Chapter 3: Stoichiometry Chapter 4: Types of Chemical Reactions and Solution Stoichiometry	3 weeks
III: Atomic Theory, Nuclear Chemistry, & Bonding	Chapter 7: Atomic Structure and Periodicity Chapter 18: The Nucleus (A Chemist's View) [18.1-18.2] Chapter 8: Bonding (General Concepts) Chapter 9: Covalent Bonding (Orbitals) [9.1]	5 ½ weeks
IV: States of Matter	Chapter 5: Gases [5.1-5.9] Chapter 10: Liquids and Solids [10.1-10.3, 10.6-10.9]	4 weeks
V: Solutions & Thermochemistry	Chapter 11: Properties of Solution Chapter 6: Thermochemistry	4 weeks
VI: Kinetics & Equilibrium*	Chapter 12: Chemical Kinetics Chapter 13: Chemical Equilibrium	4 weeks
VII: Acid-Base Chemistry & Aqueous Equilibrium	Chapter 14: Acids and Bases Chapter 15: Applications of Aqueous Equilibria	4 weeks
VIII: Thermodynamics & Equilibrium	Chapter 16: Thermodynamics Chapter 17: Electrochemistry	3 ½ weeks
IX: Coordination Chemistry & Introduction to Organic Chemistry	Chapter 21: Transition Metals and Coordination Chemistry Chapter 22: Organic and Biological Molecules	1 ½ weeks
<i>May 6th—AP Exam</i>		

*Part one of Unit VI (Kinetics) at the end of first semester.